

REMARKS

I. Introduction

Claims 8 to 21 are currently pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Allowed Claims 18 to 21

Applicants note with appreciation the indication that claims 18 to 21 are allowed.

III. Rejection of Claims 8 to 17 Under 35 U.S.C. § 103(a)

Claims 8 to 17 were rejected under 35 U.S.C. § 103(a) as unpatentable over European Patent Application No. 0 304 257 (“McGregor et al.”) “in view of well known prior art.” It is respectfully submitted that the present rejection should be withdrawn for the following reasons.

In the following, cites to column and line numbers refer to U.S. Patent No. 4,965,833.

As an initial matter, it is noted that the Final Office Action has again referenced “well known prior art” without any identification whatsoever of what is considered to constitute such “well known prior art.” In the Amendment filed on April 22, 2005, any and all assertions of well known fact contained in the Office Action dated February 7, 2005 were adequately traversed. To date, no published information or affidavit under 37 C.F.R. § 1.104(d)(2) has been provided to support the unsupported allegations of “well known prior art.” The discussion on page 2, paragraph 2 of the Final Office Action does not in any manner provide any clarification. As such, the present rejection should be withdrawn for this reason alone. Applicants again traverse any and all allegations of well known fact and respectfully request specific identification of what “well known prior art” is being relied upon. Applicants again request published information and/or an affidavit under 37 C.F.R. § 1.104(d)(2) to support any and all allegations of well known fact.

Claim 8 relates to a method for operating a voice-controlled system in a motor vehicle, and recites detecting a total signal which includes a voice signal and a background noise signal by microphones, performing a frequency shift on each of the detected total signals, and subtracting the frequency-shifted total signal (including a voice signal and a

background noise signal) of one microphone from a detected signal of a second microphone, and vice versa.

The Final Office Action admits that McGregor et al. do not disclose subtracting a frequency-shifted total signal of one microphone from a detected signal of another microphone. Instead, the Final Office Action asserts that feeding of a phase-reversed sound of an additional microphone into a pre-amplifier of the system of McGregor et al., as allegedly discussed at column 6 line 65 to column 7, line 6, is somehow pertinent to the issue of patentability of claim 8 or is somehow related to subtraction of a non-phase-reversed sound from a signal.

As set forth in Applicants' Response filed April 25, 2005, the additional microphone of McGregor et al. is provided solely for the purpose of picking up engine noise, and accordingly does not detect a signal that includes a voice signal. Therefore, even if the signal of the additional microphone is subtracted from a signal of another microphone instead of adding the signal after a phase shift, it still does not disclose or suggest, "subtracting the frequency-shifted total signal [including *a voice signal*] of a first one of the plurality of microphones."

In the Response to Arguments section, the Final Office Action asserts that the additional microphone inherently picks up voice signals. To rely on inherency, the Office Action must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; and see *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'l. 1990)). The M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur or be present in the prior art does not establish the inherency of that result or characteristic. The Final Office Action has not provided a basis in fact and/or technical reasoning to support the assertion that the additional microphone of McGregor et al. necessarily picks up voice signals. Indeed, since the additional microphone is provided in order to obtain an engine noise signal to be canceled out from a signal of another microphone before sending the signal of the other microphone to a loudspeaker for a voice signal to be heard, it appears that the additional microphone is positioned where only the engine noise would be picked up, thereby providing for the cancellation of only engine noise, and not voice signals. The Final Office Action asserts that the additional microphone "picks up anything that is there." However, nowhere do McGregor et al. disclose or suggest that the additional microphone is positioned where there are voice signals, i.e., where "anything that is there" includes voice signals.

Furthermore, as set forth in Applicants' Response filed April 25, 2005, McGregor et al. state that the reason for the frequency shift is so that the signal output by the loudspeaker would be filtered as noise when and if it is detected by a microphone, thereby preventing 'howl-around.' Col. 4, lines 18 to 19. McGregor et al. do not disclose, or even suggest, that the engine noise signal detected by the additional microphone is subject to a frequency shift. Indeed, the reason for the frequency shift is not applicable to the signal of the additional microphone, which is not sent to a loudspeaker, but is rather phase-reversed to cancel engine noise. Since the signal does not emerge from the loudspeaker, it does not cause a 'howl-around.' Therefore, the addition of the phase-shifted signal of the additional microphone to a microphone detecting a vehicle occupant's voice signal does not disclose or suggest subtracting a *frequency-shifted* signal of one microphone from a detected signal of another microphone.

Since McGregor et al. do not disclose or suggest "subtracting the *frequency-shifted* total signal [including *a voice signal*] of a first one of the plurality of microphones from the detected total signal of a second one of the plurality of microphones before shifting the frequency of the total signal of the second one of the plurality of the microphones and vice versa," it is therefore respectfully submitted that McGregor et al. do not render unpatentable claim 8.

Claim 13 relates to a device for operating a voice-controlled system in a motor vehicle. Claim 13 recites a frequency-shifting device connected between microphones of one subsection of a passenger compartment and loudspeakers of another subsection of the passenger compartment. Claim 13 further recites a summation point corresponding to each of the subsections, such that the summation point subtractively superimposes a loudspeaker signal and a microphone signal of the respective subsection. The Final Office Action admits that McGregor et al. do not disclose subtractive superimposition of signals. Instead, the Final Office Action asserts that feeding of a phase-reversed sound of an additional microphone into a pre-amplifier of the system of McGregor et al., as discussed at column 6 line 65 to column 7, line 6, is somehow pertinent to the question of patentability of claim 13 or is somehow related to subtractive superimposition of signals. However, the sound subject to phase-reversal in McGregor et al. is detected by a microphone for picking up an *engine noise-signal*. Nowhere do McGregor et al. disclose or suggest that the additional microphone is in a subsection of a *passenger compartment*. Accordingly, McGregor et al. do not disclose or suggest "subtractively superimposing a parallelly tapped loudspeaker signal and microphone signal of the respective subsection [of a passenger compartment]."

Furthermore, this additional microphone is not connected to a loudspeaker, and a frequency-shifting device is not connected between it and a loudspeaker. Accordingly, McGregor et al. do not disclose or suggest subtractively superimposing a parallelly tapped loudspeaker signal and the microphone signal of the respective subsection, *where a frequency-shifting device* is connected between the loudspeaker of the subsection and the microphone of a different subsection, and *where a frequency shifting device* is connected between the microphone of the subsection and the loudspeaker of the different subsection.

Furthermore, claim 13 recites a summation point corresponding *to each subsection*. McGregor et al. do not disclose, or even suggest, subtracting a signal detected by voice detecting microphones from an engine noise signal detected by an additional microphone. Thus, McGregor et al. do not disclose, or even suggest, all of the features recited in claim 13. It is therefore respectfully submitted that McGregor et al. do not render unpatentable claim 13.

As for claims 9 to 12, which ultimately depend from claim 8 and therefore include all of the features recited in claim 8, it is respectfully submitted that McGregor et al. do not render unpatentable these dependent claims for the same reasons set forth above in support of the patentability of claim 8. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) (any dependent claim that depends from a non-obvious independent claim is non-obvious).

As for claims 14 to 17, which ultimately depend from claim 13 and therefore include all of the features recited in claim 13, it is respectfully submitted that McGregor et al. do not render unpatentable these dependent claims for the same reasons set forth above in support of the patentability of claim 13. *Id.*

As regards the allegation appearing on page 3 of the Final Office Action that “[a]dding a phase reversal is equivalent to subtracting a non-phase reversal signal,” in order to rely on alleged equivalency as a rationale to support an obviousness rejection, the alleged equivalency must be recognized in the prior art and cannot be based on an applicant’s own disclosure or the mere fact that the components at issue may be functional or mechanical equivalents. Withdrawal of this rejection for this additional reason is respectfully requested.

In view of the foregoing, withdrawal of this rejection is respectfully requested.

IV. Conclusion

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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